



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

TB

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/129,883	08/06/1998	HISASHI YAMAGISHI	Q46699	5361

7590

08/27/2003

SUGHRUE MION ZINN MACPEAK & SEAS
2100 PENNSYLVANIA AVENUE NW
WASHINGTON, DC 200373202

EXAMINER

BLAU, STEPHEN LUTHER

ART UNIT PAPER NUMBER

3711

30

DATE MAILED: 08/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/129,883

Applicant(s)

YAMAGISHI ET AL.

Examiner

Stephen L. Blau

Art Unit

3711

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 November 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 16 is/are allowed.
- 6) ☒ Claim(s) 4-15 is/are rejected.
- 7) ☒ Claim(s) 3 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Decision of Appeal and Remand

1. This Office Action is based on the remand comments of the Board of Patent Appeals dated 29 May 2003 which direct to examiner to determine obviousness of additional matters (Pages 12-15). The examiner has reviewed the comments and have written rejections based on the three different matters brought up by the Board of Patent Appeals.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 4-5, 7, 9, and 11-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamagishi (563).

Yamagishi (563) discloses a multi-piece solid golf ball having a solid core (Title), a solid core having a distortion of 4 mm under a load of 100 kg (CE3, Table 4), an inner cover layer having a hardness of 40 Shore D in the form of an inner cover layer being made of HYTREL 4047 (Table 4, Footnote *5, See Egashira (5,439,227) Table 1,

Art Unit: 3711

footnote 2), an outer cover layer having an hardness of 65 Shore D (CE3, Table 4), a product of Shore D hardnesses of inner and outer cover layers being 2600, an outer cover layer having a gage of 2.1 mm (CE3, Table 4) and dimple pattern I (Table 4) having diameters such that a largest diameter is 4.1 mm, dimple depth for a largest size dimple being .21 mm, Vo being .50 for a largest size dimple, Vo for the ball being .50, and dimples of a smaller type having a diameter 3.4 mm and a depth of .21 mm (Dimple type I, Table 3).

Yamagishi lacks for Comparative Example 3 dimples having a proportion V-R (%) of the total of the volumes of dimples spaces each defined below a plane circumscribed by the dimple edge to the overall volume of a phantom sphere given on the assumption that the golf ball surface is free of dimples being .7 to 1.0 %,

Yamagishi (563) discloses three types of dimple patterns which all seem favorable to a golf ball in the form of each type is used and balls have favorable characteristics as scrape resistance, continuous durability, and feeling (Table 4), type II dimples having at least three types of dimples which are different in diameter, a largest diameter of 4.150 mm, a dimple depth for a largest size dimple being .210 mm, Vo being .48 for a largest size, Vo for the ball as a hole being .48, dimples of a smallest type having a diameter of 3.5 mm and a depth of .210 mm (Type II, Table 3), all type II dimple type balls have good continuous durability (Table 4, Col. 7, Lns. 29-35), and all balls of Yamagishi (563) having a ball with improved flying distance, controllability, straight travel, roll and durability (Col. 1, Lns. 50-57). Yamagishi (563) does not specifically disclose a V-R (%) but clearly as shown in enclosure to amendment dated 8

March 2000 type II dimples have a V-R (%) of .996. In view all the patterns of dimples being favorable in the patent of Yamagishi (563) it would have been obvious to modify the Comparative Example 3 of Yamagishi (563) to have type II dimples which also as type I dimples would meet parameters for dimples as defined by the claims in order to select a suitable alternative for a dimple pattern other than type I, in order to provide balls with good continuous durability, and in order to have a ball with improved flying distance, controllability, straight travel, roll and durability.

4. Claims 4-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Egashira in view of Yamagishi (563).

Egashira discloses a multi-piece solid golf ball having a solid core (Abstract), a solid core having a distortion of 3.76-3.77 mm under a load of 100 kg (Examples 3-4 Table 2, footnote 1), an inner cover layer in the form of an core outer layer (2) having a hardness of 40 Shore D (Examples 3-4, Table 1, footnote 2), an outer cover layer in the form of a cover (4) having an hardness of 63 Shore D (Examples 3-4, Table 2), a product of Shore D hardnesses of inner and outer cover layers being 2520, and an inner cover layer in the form of an outer core layer (2) having an gage of 1.8 mm (Example 4, (((Core Inner layer + Core Outer layer) – Core Inner layer)/2), an outer cover layer having a gage of 2.0-2.1 mm (Examples 3-4, Table 2), a cover (inner and outer layers) having a total gage of 3.8 mm in the form of a core outer layer and a cover layer (Example 4, Table 2), and an outer cover layer having a Shore D hardness of 62 which

would result in a product of Shore D hardnesses of inner and outer cover layers being 2480 for an inner cover layer Shore D hardness of 40 (Example 2).

Egashira lacks dimples and a proportion V-R (%) of the total of the volumes of dimples spaces each defined below a plane circumscribed by the dimple edge to the overall volume of a phantom sphere given on the assumption that the golf ball surface is free of dimples being .7 to 1.0 %, dimples having diameters such that a largest diameter is in the range of 3.7 to 4.5 mm, dimple depth for a largest size dimple being in a range of .15 to .25 mm, Vo being in a range of .4 to .52 for a largest size dimple, Vo for the ball as a whole is in a range of .38-.55, and dimples of a smaller type having a diameter in the range of 2 to 3.7 mm and a depth in the range of .08 to .23 mm.

Yamagishi (563) discloses three types of dimple patterns which all seem favorable to a golf ball in the form of each type is used and balls have favorable characteristics as scrape resistance, continuous durability, and feeling (Table 4), a pattern having a plurality of dimples, at least three types of dimples which are different in diameter, a largest diameter of 4.150 mm, a dimple depth for a largest size dimple being .210 mm, Vo being .48 for a largest size, Vo for the ball as a whole being .48, dimples of a smallest type having a diameter of 3.5 mm and a depth of .210 mm (Type II, Table 3) in order to have a ball with improved flying distance, controllability, straight travel, roll and durability (Col. 1, Lns. 50-57). In addition, Yamagishi (563) discloses a Vo of .48 in order to prevent a stall and a descending trajectory (Col. 5, Lns. 38-47). Yamagishi (563) does not specifically disclose a V-R (%) but clearly as shown in enclosure to amendment dated 8 March 2000 type II dimples have a V-R (%) of .996.

In view of the patent of Yamagishi (563) it would have been obvious to modify the ball of Egashira to have type II dimples which would meet parameters as defined by the claims in order to utilize a dimple pattern available in the market place to improve flying distance, controllability, straight travel, and roll.

5. Claims 4-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Higuchi in view of Yamagishi (563).

Higuchi discloses a multi-piece solid golf ball having a solid core (1) (Title), an inner cover layer in the form of an intermediate layer (2), an outer cover layer in the form of a cover (3) (Fig. 1A), a multiplicity of dimples that may be arranged in a number of ways (Col. 4, Lns. 32-37), an inner cover layer having Shore D hardnesses of 40 (Table 2, E1, E3, and E4), an outer cover layer having a Shore D hardnesses of 65, 60 and 65 (Table 2, E1, E3, and E4), products of 2600, 2400, and 2600 respectively, a core having distortion values of 4.02, 3.53 and 3.99 mm respectively (Table 2, Note, E1, E3, and E4), an inner cover layer having a gage of 1.7, 1.7 and 2.01 mm respectively (Table 2, E1, E3, and E4), an outer cover layer having a gage of 2.0, 1.99 and 2.29 (Table 2, E1, E3, and E4), and a cover (inner and outer layers) having a total gage of 3.7, 3.69, and 4.30 mm in the form of an intermediate layer and a cover layer (Table 2, E1, E3, and E4).

Higuchi lacks dimples having a proportion V-R (%) of the total of the volumes of dimples spaces each defined below a plane circumscribed by the dimple edge to the overall volume of a phantom sphere given on the assumption that the golf ball surface is

free of dimples being .7 to 1.0 %, dimples having diameters such that a largest diameter is in the range of 3.7 to 4.5 mm, dimple depth for a largest size dimple being in a range of .15 to .25 mm, Vo being in a range of .4 to .52 for a largest size dimple, Vo for the ball as a whole is in a range of .38-.55, and dimples of a smaller type having a diameter in the range of 2 to 3.7 mm and a depth in the range of .08 to .23 mm.

Yamagishi (563) discloses three types of dimple patterns which all seem favorable to a golf ball in the form of each type is used and balls have favorable characteristics as scrape resistance, continuous durability, and feeling (Table 4), a pattern having a plurality of dimples, at least three types of dimples which are different in diameter, a largest diameter of 4.150 mm, a dimple depth for a largest size dimple being .210 mm, Vo being .48 for a largest size, Vo for the ball as a whole being .48, dimples of a smallest type having a diameter of 3.5 mm and a depth of .210 mm (Type II, Table 3) in order to have a ball with improved flying distance, controllability, straight travel, roll and durability (Col. 1, Lns. 50-57). In addition, Yamagishi (563) discloses a Vo of .48 in order to prevent a stall and a descending trajectory (Col. 5, Lns. 38-47). Yamagishi (563) does not specifically disclose a V-R (%) but clearly as shown in enclosure to amendment dated 8 March 2000 type II dimples have a V-R (%) of .996. In view of the patent of Yamagishi (563) it would have been obvious to modify the ball of Higuchi to have type II dimples which would meet parameters as defined by the claims in order to utilize a dimple pattern available in the market place to improve flying distance, controllability, straight travel, and roll.

Allowable Subject Matter

6. Claim 16 is allowed. None of the prior art discloses or renders as obvious a solid core having a distortion of 2.8 to 3.0 mm under an applied load of 100 kg, a product of Shore D hardness of an inner and outer cover layer in relation to V-R (%), and three dimple types in addition to the other elements of structure claimed. CE1 of Egashira has this distortion value but the product of CE1 of requires the VR (%) to be .6 to .9 %. Only dimple type III of Yamagishi (563) meet this however this dimple type has only two different sized dimples and not three.

7. Claim 3 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. None of the prior art discloses or renders as obvious both the hardness of the inner and outer layers being up to 63 shore D Hardness in addition to the elements of structure claimed in claim 4.

Conclusion


8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steve Blau whose telephone number is (703) 308-2712. The examiner is available Monday through Friday from 8 a.m. to 4:30 p.m.. If the

Application/Control Number: 09/129,883
Art Unit: 3711

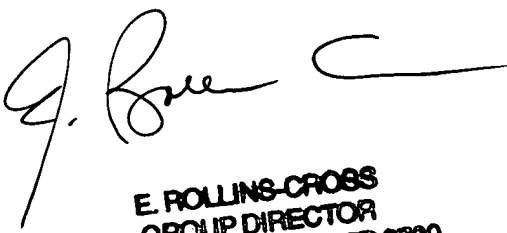
Page 9

examiner is unavailable you can contact his supervisor Paul Sewell whose telephone number is (703) 308-2126. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0858. (TC 3700 Official Fax 703-872-9302, TC 3700 After Final Fax 703-872-9393)

Sib/ 25 July 2003


STEPHEN BLAU
PRIMARY EXAMINER


Sebastiano Passaniti
Primary Examiner


E. ROLLINS-CROSS
GROUP DIRECTOR
TECHNOLOGY CENTER 3700